



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

May 26, 2016

Mr. Scott McClendon
Chief Regulatory Division
US Army Corps of Engineers
Wilmington District
Regulatory Field Office
69 Darlington Avenue
Wilmington, NC 28403

Subject: EPA Comments on Final Environmental Impact Statement (FEIS) for the Ocean Isle Beach Shoreline Protection Project, N.C.; CEQ Number: 20160084

Dear Mr. McClendon:

Pursuant to Section 309 of the Clean Air Act and Section 102(2)(C) of the National Environmental Policy Act (NEPA), the U.S. Environmental Protection Agency (EPA) Region 4 Office has reviewed the Final Environmental Impact Statement (FEIS) for the Ocean Isle Beach (OIB) Shoreline Protection Project. This FEIS provides an evaluation of the environmental consequences of several alternative plans that would address chronic erosion at the eastern end of OIB with a goal of protecting public infrastructure, roads, homes, vacant parcels and beaches. The EPA understands that the U.S. Army Corps of Engineers, Wilmington District ('Corps') is the lead Federal agency for this action and responsible for NEPA compliance. The EPA provided comments on March 6, 2015, on the Draft Environmental Impact Statement (DEIS) for this project, rating the DEIS as 'EC-2', indicating that we had environmental concerns and requested additional information.

Our comments provided to the Corps on the DEIS primarily focused on the areas of water quality, fisheries resources, endangered species, and potential indirect and cumulative impacts. The EPA notes that the Corps provided responses to our comments in a dedicated section of the FEIS – Appendix G. The EPA appreciates the Corps efforts to organize all responses to comments in a concise table in Appendix G. The EPA has reviewed the responses to our comments on the DEIS provided in Appendix G. The EPA continues to have environmental concerns over the description of economic benefits for each alternative, causes of erosion in the project area, issues dealing with predicted sea-level rise, consideration of greenhouse gas emissions, the estimated number of parcels protected by the project, and the proposed monitoring and sampling. Our review and analysis of responses to comments are provided in the enclosed detailed comments (See enclosure).

The EPA appreciates the opportunity to review this FEIS. We request that the Corps provide specific responses in the Record of Decision (ROD) to our outstanding environmental concerns listed above and detailed in the enclosure. We also request that the Corps provide the EPA with a copy of the final signed ROD. Should the Corps have questions regarding our comments, please feel free to contact Mr. Dan Holliman of my staff at (404) 562-9531 or by e-mail at holliman.daniel@epa.gov.

Sincerely,

 for

Christopher A. Militscher
Chief, NEPA Program Office
Resource Conservation and Restoration Division

Enclosures: Detailed Comments
Brunswick County GIS Map

**Enclosure: EPA Detailed Technical Comments
Town of Ocean Isle Beach Shoreline Protection Project
Brunswick County, North Carolina
Final Environmental Impact Statement
CEQ No.: 20160084**

The EPA has selected specific areas of environmental concern/comments (provided on the DEIS) and responses (provided in the FEIS) that might need additional clarification by the Corps. The EPA has not included any additional comments for the responses that we deemed adequate and complete.

Economic Benefits of Alternatives

EPA Comment on DEIS: It is unclear from the discussion in the DEIS on how the preferred project compares to the other alternative projects for economic benefit. The EPA recommends providing additional detail in the FEIS relating to the economic benefits of each alternative.

COE Response in FEIS: Disagree. The economic impact of the various alternatives is summarized in Table 3.10 and 3.11 in Chapter 3 with more detailed discussions provided in various sections of Chapter 5 as well as in the Engineering Report (Appendix B). While there is no specific discussion or direct comparison of the economics of one alternative versus another, this was done purposely so as not to appear to bias the information presented.

EPA Response: The EPA reviewed Tables 3.10, 3.11, Chapter 5, and Appendix B and notes that these tables and Sections of the EIS only provide the reader with an understanding of the project cost for each alternative, not the economic benefit. Understanding the economic benefit of each alternative is critical for decision-making and important for the public to be able to understand the cost of each alternative and the potential economic benefit of each alternative.

Additional review of Table 4.2 in Appendix B – Engineering Report - shows that \$35,113,800 in damages to undeveloped parcels, structures, and other infrastructure is anticipated over a 30-year period if current management strategies are employed. The EPA also notes that the proposed project, Alternative 5 – Construction of a 750-ft. Terminal Groin, will cost \$45,864,000 over a 30-year period to protect that expected losses under current management strategies. From the review of the relevant sections of the FEIS, it remains unclear from an economic standpoint how Alternative 5 would be the preferred alternative.

Orientation of Shallotte Inlet

EPA Comment on DEIS: It appears that the orientation and position of the Shallotte Inlet is a significant source of the erosion issues at the East end of Ocean Isle Beach (OIB). It not clear how the current proposed project will fully address this issue. The EPA recommends that the FEIS provide clarification on how the preferred alternative will address this issue.

COE Response in FEIS: As stated in Chapter 3, Alternative 5: "Under Alternative 5, the applicant's preferred alternative, a 750-foot terminal groin with beach fill would be constructed

148 feet east of baseline station 0+00. This structure is intended to provide shoreline stabilization and would serve to reduce the erosion rate further west thereby reducing the nourishment interval of the Federal project from every 3 years to every 5 years and relieve the necessity of sandbag revetments within the project area."

EPA Response: The response provided appears to be for another comment or the Corps misunderstood the EPA's comment on this issue. It is clear from the FEIS that the orientation of the Shallotte Inlet is a significant factor in erosion rates on the eastern end of OIB. In a response provided to another EPA comment it is stated that "During the formulation of the Federal storm damage reduction project, the USACE attributed much of the chronic erosion on the eastern portion of Ocean Isle Beach to changes in the orientation and position of the main ebb channel through Shallotte Inlet." Therefore, as stated in our comments on the DEIS, it remains unclear how the preferred alternative (construction of a terminal groin) is the solution to the erosion issues when the orientation of the inlet appears to be the primary cause.

Sea Level Rise (SLR)

The EPA remains concerned about the potential impact of sea-level rise on the proposed project and the project area. In 2015, the N.C. Coastal Resources Commission Science Panel updated their 2010 Study on NC and sea-level rise.¹ The EPA recommends the Corps evaluate this recent report and the predicted sea-level rise in the project area prior to issuance of the Record of Decision (ROD).

It is also unclear from the review and comments provided in the FEIS if the Corps modeled for storm surge conditions and how these conditions would impact the proposed project. The Corps has a model for calculating storm surge, i.e., Coastal Storm Modeling System, the Coastal 2D (horizontal) steady-state nearSHORE morphology response model (CSHORE), and the Advanced Circulation (ADCIRC) model to simulate the effects of storm surge and circulation have on inundation, flooding, sediment transport and beach erosion.² The EPA recommends that the Corps evaluate the impacts of storm surge on the project area and proposed project prior to issuance of the ROD.

Consideration of Climate Change and Greenhouse Gas (GHG) Emissions

In future analyses, the EPA recommends that the Corps estimate the direct and indirect GHG emissions caused by the proposal and its alternatives, including construction and operation emissions. Examples of tools for estimating and quantifying GHG emissions can be found on CEQ's website.³ These emissions levels can serve as a reasonable proxy for climate change impacts when comparing the alternatives and considering appropriate mitigation measures.

¹ Final draft report (MARCH 31, 2015) available at <http://www.ncnhp.org/web/cm/sea-level-rise-study-update>

² Available at <http://www.erdc.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/9254/Article/476697/coastal-storm-modeling-system.aspx>

³ https://ceq.doe.gov/current_developments/GHG_accounting_methods_7Jan2015.html

The EPA recommends that future NEPA analyses describe measures to avoid, reduce, and compensate for GHG emissions caused by the proposal, including reasonable alternatives and other practicable mitigation opportunities, and disclose the estimated associated GHG reductions. For example, the Corps could consider fuel-efficient construction machinery. For this project, the EPA also recommends that the Corps consider commitments in the ROD to implement reasonable mitigation measures that would reduce project-related GHG emissions.

Parcels Protected by Project

EPA Comment on DEIS: It is stated in the DEIS that “238 parcels east of station 15+00 (location just west of Shallotte Boulevard); 45 of which have homes. All of the parcels and homes are vulnerable to erosion damage over the next 30 years should the past erosion trends continue.” Figure 3.1 shows that the future predicted scarp line in 2045 will impact approximately 45 structures, but it is unclear on how the 238 parcels estimate was generated. These parcels account for a significant amount of the financial losses predicted in the future scenarios. The EPA recommends that the FEIS clearly define where these parcels are located and how they will be impacted under future erosion scenarios.

COE Response in FEIS: The number of parcels that could be impacted under the without project condition will be revised to only reflect parcels deemed to be developable. In this regard, parcels with a tax value of less than \$2000 were deleted from the damage assessment resulting in a revised total of 155 parcels that could be impacted over the 30-year evaluation period. The affected parcels are shown on Figure 3.1. Reference to Figure 3.1 was inadvertently deleted or omitted but has been added to the text. A similar figure is provided in Appendix B as Figure 4.1. The figures show which parcels would be affected by continued erosion and no additional detail is needed. If the USACE wishes, a spreadsheet could be provided that identifies which parcels were included in the analysis.

EPA Response: The EPA has reviewed Figure 3.1 and Appendix B Figure 4.1. Based on our review of the material provided in the FEIS, the predicted shoreline landward retreat (by 2045) endangers approximately 50 structures and approximately 30 undeveloped parcels. The EPA remains very unclear where the 155 parcels cited in the Corps response are located. In addition, the Corps continues to use the 238 parcel number in the executive summary and throughout the FEIS. One example, it is stated on page 155 of the FEIS that, “Based on Delft3D and other analysis, there are currently 238 parcels and 45 homes east of station 15+00 that are vulnerable to erosion damage over the next 30 years should the past erosion trends continue.”

A further review of Brunswick County GIS data show more than 80 parcels located off the eastern end of OIB that are already submerged (Please see the attached map). If any of these parcels are actually being counted as ‘protected parcels’ by the proposed project, this should have been fully disclosed during the NEPA process. In addition, if new development is being proposed on the eastern end of OIB, the cumulative impact of this additional development should also have been disclosed during the NEPA process. The EPA considers these issues vital to an objective decision-making process. Therefore, the EPA believes that these issues need to be fully

disclosed in the ROD to ensure that the public and other stakeholders are clear on how and why the preferred alternative was selected.

Mitigation Commitments

EPA Comment on DEIS: There are potentially substantial areas with threatened and endangered species and other sensitive species within the proposed project area. There are shellfishing, Essential Fish Habitat (EFH) and other high quality water uses within the project area that may be impacted by the preferred Alternative 5. The FEIS should disclose consultation efforts and any conservation or mitigation project commitments required by natural resources agencies.

COE Response in FEIS: Chapter 6 includes all proposed mitigation measures for this project. A finalized mitigation plan will be disclosed in the Record of Decision

EPA Response: The EPA supports the inclusion of the mitigation measures agreed to in all consultation efforts for this proposed project in the ROD.

Monitoring and Sampling

EPA Comments on DEIS:

Comment 1 – It is stated on P. 191: *“In order to avoid impacts associated with the transport of fill material to the disposal sites, the Town of Ocean Isle Beach will negotiate with the dredging contractor to monitor and assess the pipeline during construction.”* This statement is very unclear and provides no real details on what type of monitoring will be required during construction. EPA recommends clarification in the FEIS.

Comment 2 - The USEPA requests that any reported exceedances to water quality standards should also be reported to the NCDENR Water Quality Section and the USEPA and shown as a project commitment in the FEIS, Record of Decision and USACE Chief's Report.

COE Responses in FEIS:

Response 1 – The Record of Decision will include specific terms and conditions that specify what type of monitoring will be required during construction.

Response 2 - Text in Chapter 6 has been edited to read, "Turbidity monitoring during construction, if required, will be managed by the contractor. The contractor will be responsible for notifying the construction engineer in the event that turbidity levels exceed the State water quality standards. The contractor will be advised to report any exceedances of the turbidity standard to the NCDENR Division of Water Resources and the USEPA."

EPA Response: The EPA continues to have concerns that the specific terms and conditions of monitoring for this project have not been fully disclosed in the DEIS or FEIS. The EPA supports having specific terms and conditions for monitoring in the ROD because they will be legally binding. However, the public and reviewing agencies have not been afforded the opportunity to view and comment on the proposed monitoring conditions. The EPA also has concerns that the

response for turbidity monitoring uses the term: "if required." Implementing a turbidity monitoring plan is essential to ensuring compliance with the State water quality standards during project construction activities. The EPA recommends that a clear commitment to turbidity monitoring be included in the ROD.

Shoreline Change Monitoring

EPA Comment on DEIS: It also appears unlikely that the USACE can definitively determine if the terminal groin will impact beaches in the vicinity of the project, mainly because these systems are so dynamic. Can it be assumed that all significant changes to beach profiles in the vicinity of the project will be attributed to the project (with exception to storms)? EPA recommends clarification in the FEIS.

COE Response in FEIS: Shoreline change thresholds have been established on both sides of Shallotte Inlet. Should negative shoreline changes that exceed these thresholds after the terminal groin is installed, mitigation measures may be required.

EPA Response: The EPA appreciates the additional clarification and information provided in Chapter 6 related to beach profile monitoring and thresholds that will be used to determine the terminal groin's impact on shorelines in the vicinity of the project. The EPA recommends these monitoring conditions be included in the ROD.

List of Preparers

Section 1502.17 of the Council on Environmental Quality regulations specifically requires the identification of the names and qualifications of persons who were primarily responsible for preparing the EIS or significant background papers, including basic components of the statement. The EPA notes that the FEIS does not include a list of preparers. The EPA recommends that the list of preparers also be included in the ROD.

Brunswick County NC GIS



May 13, 2016

1 = 1000 Feet



Disclaimer: Map and parcel data are believed to be accurate, but accuracy is not guaranteed. This is not a legal document and should not be substituted for a title search, appraisal, survey, or for zoning verification.